



Volunteers Sought to Assist NCEES

The Structural Exam Committee of EPE needs help. They are changing the way they grade the Structure II exam, and are in need of additional volunteers to grade these exams.

They need 10 scorers (graders) for bridge problems and 24 for building problems. They also need volunteers for cut scoring (8 for bridge, 12 for building). Cut scoring is a process of determining the scores for the exam.

The Structural Exam Committee especially needs people who passed the Structural II exam (16 hours) within the last 5 years. The Scorers are needed **Friday June 4th, Saturday June 5th, and possibly Sunday June 6th**. Cut scoring will be from Saturday afternoon to Sunday morning. Based on NCEES by-laws, scorers will be paid a small fee for their service. Cut scorers will not be paid.

This is a great opportunity for SEI to become involved in the NCEES process. This exam committee is responsible for the content of the Structural PE exams, so participation on this committee can influence the look of these exams.

Please contact Bill Merwath
(ASCE Liaison to EPE) at
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or Sweanum Soo, chair of the
Structural Exam Committee, at
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IABMAS'04

October 19 – 22, 2004, Kyoto, Japan

The Second International Conference on Bridge Maintenance, Safety and Management, IABMAS'04, will be held at the Kyoto International Conference Hall, Kyoto, Japan, October 19-22, 2004. The conference is organized by IABMAS, the International Association for Bridge Maintenance and Safety (<http://civil.colorado.edu/IABMAS>). The objective of IABMAS is to promote international cooperation in the fields of bridge maintenance, safety and management for the purpose of enhancing the welfare of society.

The mission of IABMAS'04 is to bring together all of the very best work that has been done in the fields of bridge maintenance, safety and management, and to bridge the gap between theory and

practice. The Conference Chairs are Professors Eiichi Watanabe, Kyoto University, and Dan Frangopol, University of Colorado.

The conference will be of interest to university researchers, representatives from all sections of bridge engineering, bridge engineers working with transportation departments, consultants, contractors and local authorities interested in all aspects of bridge maintenance, safety and management.



Among the co-sponsors of IABMAS'04 are

- ASCE-SEI, American Society of Civil Engineers - Structural Engineering Institute, USA
- CALTRANS, California Department of Transportation, USA
- CU, University of Colorado at Boulder, USA
- Danish Road Directorate, Ministry of Transport, Denmark
- FHWA, Federal Highway Administration, USA
- IABSE, International Association for Bridge and Structural Engineering, Switzerland
- JSCE, Japan Society of Civil Engineers, Japan
- JSMS, The Society of Materials Science, Japan
- JSSC, Japanese Society of Steel Construction, Japan
- KU-CER, Dept. of Civil and Earth Resources Engineering, Kyoto University, Japan
- NSF, National Science Foundation, USA
- TRB, Transportation Research Board, USA
- UPC, School of Civil Engineering, Barcelona, Spain

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For information about the Conference and the registration procedures, please visit the conference website at: <http://iabmas04.kuciv.kyoto-u.ac.jp> or contact the Conference Secretariat at iabmas04@str.kuciv.kyoto-u.ac.jp

Early Bird Registration

The Registration website for the
2004 Structures Congress is now open.

The cutoff date for early registration is April 21st.

You can get to the Registration website via the SEI webpage at
www.seinstitute.org or by the following URL:
<http://www.asce.org/conferences/structures2004>.



NEW Body of Knowledge

WASHINGTON, D.C. - Many Americans would be surprised - if not alarmed - to learn that the people responsible for designing their roads, bridges, buildings and drinking water are only required to hold a bachelor's degree while doctors, lawyers, physical therapists, accountants and even elementary school teachers are expected to hold professional and graduate degrees.

Despite practicing a profession where technology and techniques are ever-evolving, the educational requirements for today's young engineers are less than their counterparts' of 150 years ago. The American Society of Civil Engineers (ASCE) released a report today, *Civil Engineering Body of Knowledge for the 21st Century: Preparing the Civil Engineer for the Future*, outlining a plan to broaden and deepen the "Body Knowledge" required for future civil engineers. The knowledge, skills and attitudes that will be required of an individual entering the civil engineering profession in the 21st century must be broadened emphasizing leadership principles and technical specialization.

"Civil engineering must restructure its 150-year-old educational model to meet the challenges of the 21st century," said ASCE President Patricia D. Galloway, P.E., ASCE. "The next generation of civil engineering professionals will be engaged in increasingly complex work, requiring knowledge both broader and deeper than the current engineering education provides."

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At the turn of the last century, civil engineering graduates completed 155 credit hours, compared to the 125 credit hours earned by most of today's students. Civil engineering students take at least 20 fewer credits than did counterparts in the 1920s, and they take a whole semester less of technical and professional engineering courses at a time when the complexity of civil engineering is escalating. In comparison, law and medical students at the turn of the last century had no more than one to four years of training, compared to the average eight years of undergraduate and graduate work today.

"Most professions - business, law and medicine - do not consider the bachelor's degree a professional degree, yet engineering does," said National Academy of Engineering President William A. Wulf. "With growing global competition and the explosion of new technology changing the shape of the profession, we must restructure the way we educate engineers."

...lead to the revision of current undergraduate and graduate programs..."

The first of any engineering discipline to develop a proposal to elevate educational prerequisites for future practicing engineers, the report recommends that a graduate degree, or the equivalent of 30 credits, and practical experience be required in addition to an undergraduate degree before a civil engineer can sit for the licensure exam and practice professionally. The plan will lead to the revision of current undergraduate and graduate programs to reflect the basic skills and knowledge that will be expected of professional civil engineers, and may eventually lead to the creation of new programs. The Body of Knowledge is developed to be flexible in how future civil engineering students pursue their education. The trend towards distance learning programs and high-quality corporate and government agency education will not be ignored, and can be cultivated as an option to traditional graduate school programs for future civil engineering student.

"As the steward of the civil engineering profession, ASCE must lead the development and implementation of this new educational model," said ASCE Task Committee Chair Jeffrey S. Russell, Ph.D., "The current four-year bachelor's degree is becoming inadequate formal preparation for the practice of civil engineering in the 21st century."

ASCE's Committee on the Academic Prerequisites for the Professional Practice of Civil Engineering developed the recommended new Body of Knowledge that will serve as the foundation for the education of civil engineers in the future.

Through this new Body of Knowledge, ASCE can influence changes to the civil



engineering curricula, as well as necessary changes in licensure requirements, to ensure that the profession will meet its obligations to serve public health and safety in the increasingly complex technological world of the future.

Knowledge, skills and attitudes that comprise the Body of Knowledge include the abilities to:

- Apply knowledge of math, science and engineering;
- Design and conduct experiments as well as to analyze and interpret data;
- Design a system, component or process to meet desired needs;
- Function on multi-disciplinary teams;
- Identify, formulate and solve engineering problems;
- Understand of professional and ethical responsibility;
- Communicate effectively;
- Understand the impact of engineering solutions in a global and societal context;
- Recognize the need for and engage in lifelong learning;
- Know contemporary issues;
- Use techniques, skills and modern engineering tools necessary for engineering practice;
- Apply knowledge in a specialized area related to civil engineering;
- Understand the elements of project, construction and asset management;
- Understand business, public policy and administration fundamentals; and
- Understand the role of a leader and leadership principles and attitudes.

For the complete Body of Knowledge, please visit www.asce.org/raisethebar.

